<u>AGENDA</u>

FISH & NEAVE VISIT

AUGUST 8, 1989

PARTICIPANTS:

Philip Morris R&D
Bruce Losee
Neal Nunnally
Connie Morgan
Jim Schardt
Ulysses Smith
Murphy Sprinkel
Fran Utsch
Sung Yi

Fish & Neave Gerry deBlasi Jeff Ingerman Randy Owen Charlie Smith

I. <u>Describe BETA Objectives</u> A Typically battery

- A. Typically battery-powered, replaceable "flavor cartridge"
- B. No CO
- C. No Sidestream
- D. What differentiates BETA from DELTA/SIGMA
- E. Improved control of smoking process
- F. Regulated delivery

II. Describe constant-heated smoking article

- A. Watts vs. Temp
- B. Temp vs. TPM
- C. PTC Thermistors
- D. Subjectives

III. Describe packed-bed pulse heated smoking device

- A. Demonstrate "ash-tray" smoking device
- B. Describe heater/A.G. capsule
- C. Describe pulse control circuit
- D. Describe battery pack
- E. Subjectives; discuss demonstrated need for pulsing

IV. Describe "flavor-dot" concept

- A. Demonstrate "BETA Board"
- B. Differentiate packed-bed from flavor-dot concept
- C. Describe requirements of heater array
- D. Describe battery requirements
- E. Describe control circuit requirements for pulsing, sequencing

V. Describe "future prototype" including need for capacitor

VI. Variants/hybrid designs of flavor dot, future prototype designs

- A. Conductive A.G. as its own heater
- B. Single reuseable heater with throwaway flavor dot strip

VII. Exotic systems

- A. "Thermite-type" heat source
- B. Induction heated article with curie point control
- C. Laser-pulse heated device

2020134536

2020134537

VIII. Project terminologies

- A. A.G. (Note there is a disclosure on A.G.)
- B. O.V.
- C. Aerosol
- D. TPM
- E. Particulate phase
- F. Vapor phase
- G. Cambridge pad
- H. Glycerin
- I. Calcium carbonate
- J. Nicotine
- K. Power; energy; watts; watt-seconds; calories
- L. RTD
- M. Other
- IX. Describe laboratory capabilities

 Tour lab when it best fits schedule
- X. Detailed in-depth review of each of the BETA article components
 - A. Heater requirements: R; mass; no CO; toxicology; disposal Contracted support efforts
 - B. Battery requirements: Power vs energy density; W=VxA V/R=A Contracted support efforts; new hire
 - C. Control circuit requirements: pulse; sequencing; lockout; etc.
 Contracted support efforts (I.C.)
 - D. Capacitor requirements:
 Contracted support efforts
 - E. Kinetics, modeling studies
 - F. Fundamental studies into mechanisms of generating aerosols

XI. Considerations regarding patent coverage

- A. Process/product/apparatus/....
- B. One invention = one application
- C. Same-day filing of applications; divisions; CIP; other
- D. Prior art history
- E. Define "reduction to practice" as perhaps it might relate to eg. our "future prototype" design and to capacitor usage
- F. Patents such as US 4,735,217 to Procter & Gamble could pose an impediment to us; should concerns such as that impact on what we file

XII. <u>Present BETA areas we want to ensure are given adequate protection</u> This requires a cooperative review of present disclosures and voids

- A. All facets of ash-tray device
- B. All facets of flavor-dot concept/device
- C. Conductive A. G.
- D. Capacitor application
- E. (Could we consider "future prototype"?)